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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
REGO, DOMINIC E	
ART UNIT	**PAPER NUMBER**
2618	

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/750,665	PARK, JUNE HA	
	Examiner	Art Unit	
	Dominic E. Rego	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang *(US Patent Application Publication #20040085933)*.

Regarding claim 1, Wang teaches a method for controlling a mobile satellite tracking antenna system *(abstract)*, the method comprising the steps of:

receiving satellite signals *(paragraph 0105)* and sensing whether or not the satellite signals are intercepted (paragraph 0121);

performing a satellite signal automatic tracking mode when the received signals have a restorable level after rotating an antenna 360 degree *(Paragraph 0111: Wang teaches the information provided by the DBS receiver 130 may be monitored to determine whether the antennae are pointed at the desired satellite and if the signal is properly decoded. If that is the case, the signal lock is achieved)*, and comparing maximum variation of signal level measured through 360 degree rotation of the antenna with a room temperature noise signal level range when the received signals do not have a restorable level *(Paragraph 0111: Wang teaches If the power controller 112 detects*

that the signal strength exceeds a certain threshold the scanning is stopped immediately and the tracking control routine of block B29 is activated);

performing a satellite detection mode when the maximum variation of the measured signal level deviates from the room temperature noise signal level range, and stopping a rotation motor of the antenna from driving when the maximum variation of the measured signal level exists in the room temperature noise signal level range *(Paragraph 0111: Wang teaches If the power controller 112 detects that the signal strength exceeds a certain threshold the scanning is stopped immediately and the tracking control routine of block B29 is activated);* and

driving the rotation motor of the antenna again when a predetermined time passes after the rotation of the antenna has been stopped, measuring signal levels while rotating the antenna 360 degree, and comparing the maximum variation of the measured signal level with the room temperature noise signal level range *(Paragraph 0111: Wang teaches In the event that the controller 112 detects lack of signal strength (not exceeding the threshold) and/or improper decoding status for a certain time-out period, the controller 112 will initiated a scanning operation to scan for location of the satellite. Preferably, this scanning operation (for signal re-acquisition) will scan in a limited region around the last satellite position recorded, when the satellite signal was properly decoded. If the scanning does not find the satellite signal, a full scan of 360 degrees of azimuth angle and all possible elevation angles will be conducted).*

Regarding claim 2, Wang teaches the method for controlling a mobile satellite tracking antenna system, wherein the signal level is continuously measured even after

the rotation motor of the antenna is stopped *(Paragraph 0111: Wang teaches if the power controller 112 detects that the signal strength exceeds a certain threshold, the scanning is stopped immediately and the tracking control routine of block B29 is activated. In addition, the information provided by the DBS receiver 130 may be monitored to determine whether the antennae are pointed at the desired satellite and if the signal is properly decoded. If that is the case, the signal lock is achieved. Otherwise, the tracking control operation of block B29 is disabled and the scanning is resumed).*

Regarding claim 3, Wang teaches a method for controlling a satellite tracking system *(abstract)*, the method comprising the steps of:

receiving satellite signals *(paragraph 0105);*

comparing a maximum variation of signal level measured through a 360 degree rotation of an antenna with a room temperature noise signal level range when the received signals do not have a restorable *level (Paragraph 0111: Wang teaches if the power controller 112 detects that the signal strength exceeds a certain threshold the scanning is stopped immediately and the tracking control routine of block B29 is activated);* and

performing a satellite detection mode when the maximum variation of the measured signal level deviates from the room temperature noise signal level range *(Paragraph 0111: Wang teaches if the power controller 112 detects that the signal strength exceeds a certain threshold the scanning is stopped immediately and the tracking control routine of block B29 is activated).*

Regarding claim 4, Wang teaches the method, further comprising stopping

rotation of a motor of the antenna from driving when the maximum variation of the measured signal level exists in the room temperature noise signal level range *(Paragraph 0111: Wang teaches if the power controller 112 detects that the signal strength exceeds a certain threshold the scanning is stopped immediately and the tracking control routine of block B29 is activated).*

Regarding claim 5, Wang teaches the method, further comprising, after said receiving, sensing whether or not the satellite signals are intercepted *(paragraph 0121).*

Regarding claim 6, Wang teaches the method, further comprising, after said receiving, performing a satellite signal automatic tracking mode when the received signals have a restorable level after rotating an antenna 360 degree *(Paragraph 0111: Wang teaches the information provided by the DBS receiver 130 may be monitored to determine whether the antennae are pointed at the desired satellite and if the signal is properly decoded. If that is the case, the signal lock is achieved).*

Regarding claim 7, Wang teaches the method, further comprising rotating a motor of the antenna when a predetermined time passes after rotation of the antenna has been *stopped (Paragraph 0111: Wang teaches in the event that the controller 112 detects lack of signal strength (not exceeding the threshold) and/or improper decoding status for a certain time-out period, the controller 112 will initiated a scanning operation to scan for location of the satellite. Preferably, this scanning operation (for signal re-acquisition) will scan in a limited region around the last satellite position recorded, when the satellite signal was properly decoded. If the scanning does not find the satellite signal, a full scan of 360 degrees of azimuth angle and all possible elevation angles will*

be conducted).

Regarding claim 8, Wang The method of claim 7, further comprising measuring signal levels while rotating the antenna 360 degree *(Paragraph 0111: Wang teaches the control operations preferably include an antennae position initialization routine (block 25) that controls the azimuth angle (e.g., azimuth pointing direction) with control over azimuth motor 114 and elevation angle (e.g., elevation pointing direction) with control over the frequency of the LO 111 to scan through possible satellite positions to search for a satellite signal. Typically, this involves scanning the 360 degree azimuth angle at a given elevation angle, incrementally changing the elevation angle, and repeat the azimuth scan).*

Regarding claim 9, Wang teaches the method, further comprising comparing the maximum variation of the measured signal level with the room temperature noise signal level range *(Paragraph 0111: Wang teaches if the power controller 112 detects that the signal strength exceeds a certain threshold the scanning is stopped immediately and the tracking control routine of block B29 is activated).*

Regarding claim 10, Wang teaches the method, wherein the signal level is continuously measured even after the rotation motor of the antenna is stopped *(Paragraph 0111: Wang teaches if the power controller 112 detects that the signal strength exceeds a certain threshold, the scanning is stopped immediately and the tracking control routine of block B29 is activated. In addition, the information provided by the DBS receiver 130 may be monitored to determine whether the antennae are pointed at the desired satellite and if the signal is properly decoded. If that is the case, the signal*

lock is achieved. Otherwise, the tracking control operation of block B29 is disabled and the scanning is resumed).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamamoto et al. (US Patent #6,577,281) teaches antenna drive device and artificial satellite tracking system using the same.

Carson (US Patent Application Publication #20020180634) teaches Method for accurately tracking and communicating with a satellite from a mobile platform.

Anderson (US Patent #4,739,337) teaches mobile mechanically steerable satellite tracking antenna.

Alexander (US Patent #6,487,294) teaches secure satellite communications system.

Park (WO 02/103841) teaches a satellite tracking system using frequency scanning effect and method therof.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dominic E. Rego whose telephone number is 571-272-8132. The examiner can normally be reached on Monday-Friday, 8:30 am-5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dominic E. Rego

PHILIP J. SOBUTKA
PATENT EXAMINER